Portia

FEASIBILITY STUDY

Madison County
New Route
From US 25-70 to Revere
R-2419

Prepared by
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I. GENERAL DESCRIPTION

This report covers the construction of a new connector route between US 25-70 and Revere. The proposed project route begins at the intersection of US 25-70 and SR 1143, follows SR 1143 to SR 1404, then along SR 1404 for a short distance before turning northward over the Walnut Mountains, passing through Andy Gap, descending the other side of the mountain, and connecting to SR 1334 in Revere (see Figures 1 and 2). This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection.

The total project length is 6.2 miles, including 1.5 miles of widening existing routes and 4.7 miles of construction on new location.

The portion of the roadway on new location has an almost constant 8% upgrade from SR 1404 to Andy Gap and a constant 8% downgrade from the gap to SR 1334 in Revere. These grades are the result of the 1000-foot difference in elevation between Andy Gap and either end of the new construction.

II. PURPOSE OF PROJECT

The primary purpose of the project is to provide better access from US 25-70 to the Revere area which is across the Walnut Mountains. Madison County is considering the establishment of consolidated primary and middle schools in the Brush Creek area. The construction of this new route would provide a much shorter and safer route for school buses travelling from the area around Revere to the new schools. The use of the new route will cut approximately 9 miles off of the trip along existing routes from Revere to the intersection of US 25-70 with SR 1143. In addition to improving route for school buses, it will provide a more direct route for workers commuting to jobs or shoppers destined for the commercial areas in Walnut and Marshall. It is estimated that approximately 250 vehicles per day will initially use the proposed facility. The estimated traffic volumes for year 2010 is 500 vpd.

The present secondary roads that are to be upgraded as part of this project are very narrow and substandard. SR 1143 presently has a 12-foot pavement with very narrow shoulders and SR 1404 is unpaved with a 10-foot travel width.

The north end of the project will tie into SR 1334 which has a 16-foot paved roadway and 2-foot unpaved shoulders. At the south end of the project, SR 1143 reverts back into a 12-foot unpaved roadway beyond US 25-70. US 25-70 is the major highway through the area and has a pavement width of 22 feet.

III. RECOMMENDATIONS AND COSTS

The recommended cross section for a new route connecting Revere to US 25-70 near Brush Creek is an 18-foot paved roadway with 2-foot unpaved shoulders. The recommended alignment is shown on Figure 2. This alignment was developed to maintain a reasonable grade (approximately 8%) throughout portions of the project on new location so the roadway would be safe for school buses. The widening and improvement of SR 1143 and SR 1404 should be accomplished on the inside of curves, where practical, to improve the curvature of the highway. However, in areas closely bordered by Brush Creek, construction should primarily be along the opposite side to avoid any construction in the stream or relocation of the stream. If this improvement is implemented, it will greatly improve the access from the Revere area to US 25-70.

The estimated costs of this project are as follows:

Construction		$7,400,000
Right-of-Way		400,000
	Total	$7,800,000

The construction cost includes engineering and contingencies, and the right-of-way cost includes relocation, acquisition, and utility costs.

IV. ALTERNATIVES

Since the project involves the construction of a roadway on new location, several alternative locations could be developed. However, the approximate 1000-foot difference in elevation between the mountain gap and the roads the project ties into on either end dictates that any alternative design maintaining an 8% grade would be approximately the same length and cost as the alignment shown on Figure 2. A shorter alignment could be developed that would be less costly to build, but it would necessarily have steeper grades that would not be compatible with school bus traffic. Likewise, a longer route with better grades could be developed, but this alternative would be more costly to construct. The 8% grade was selected as the maximum practical grade for school buses over an extended length.

The 18-foot paved roadway width is recommended as the optimum cross section for the improvement, because it would be difficult for school buses to negotiate the curves on a narrower width, and providing a wider roadway would increase the cost of the project.

V. ENVIRONMENTAL EFFECTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project will require the relocation of an estimated one business. The project will also result in increased noise levels for remaining development adjacent to the roadway. The proposed project crosses and closely

parallels several small streams. Even though these streams are not designated trout streams, measures to minimize impacts on them should be implemented, such as widening the roadway away from the stream and stringent erosion control measures.

VI. FUTURE ACTIVITIES

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

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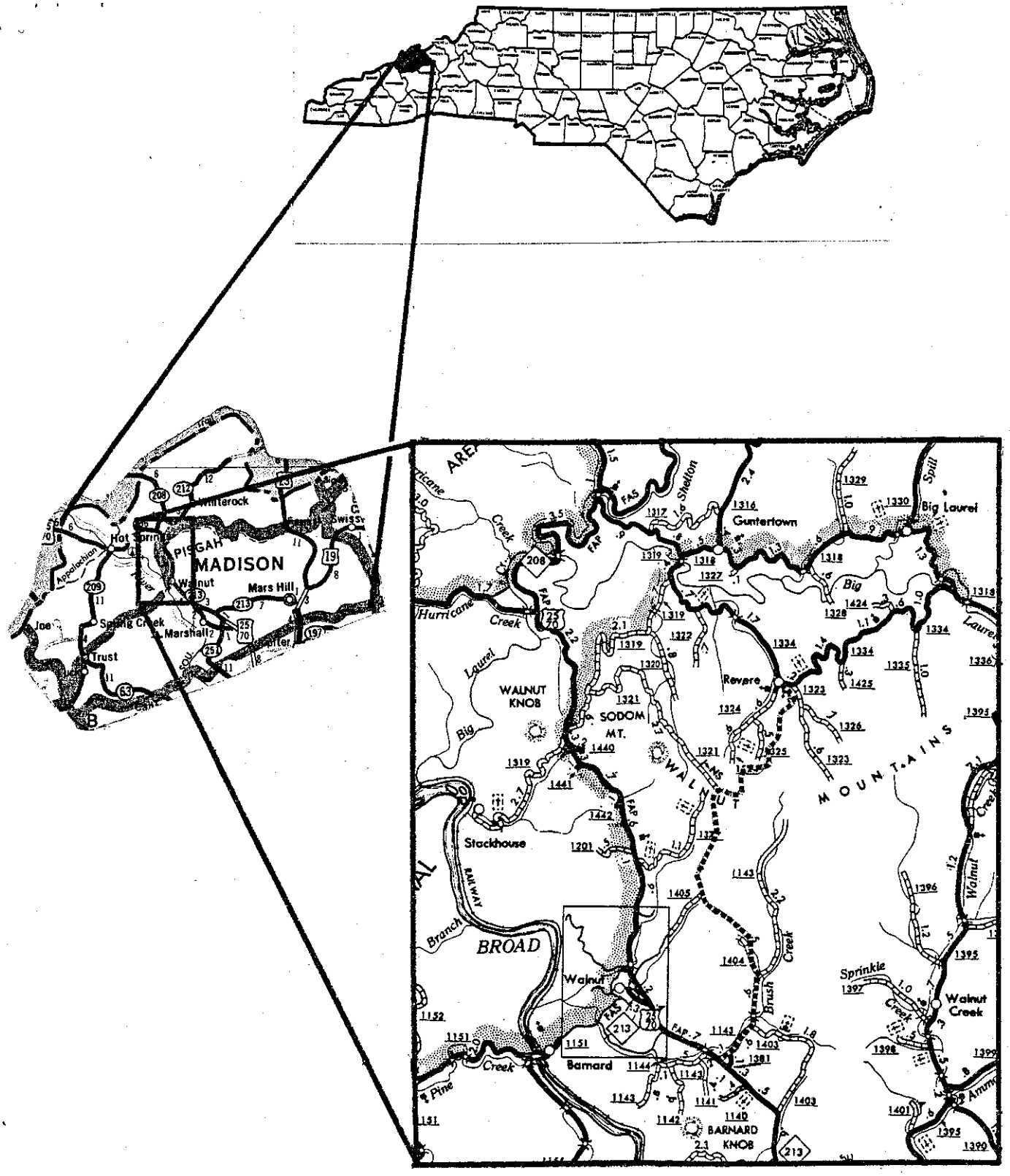

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FIG. 1

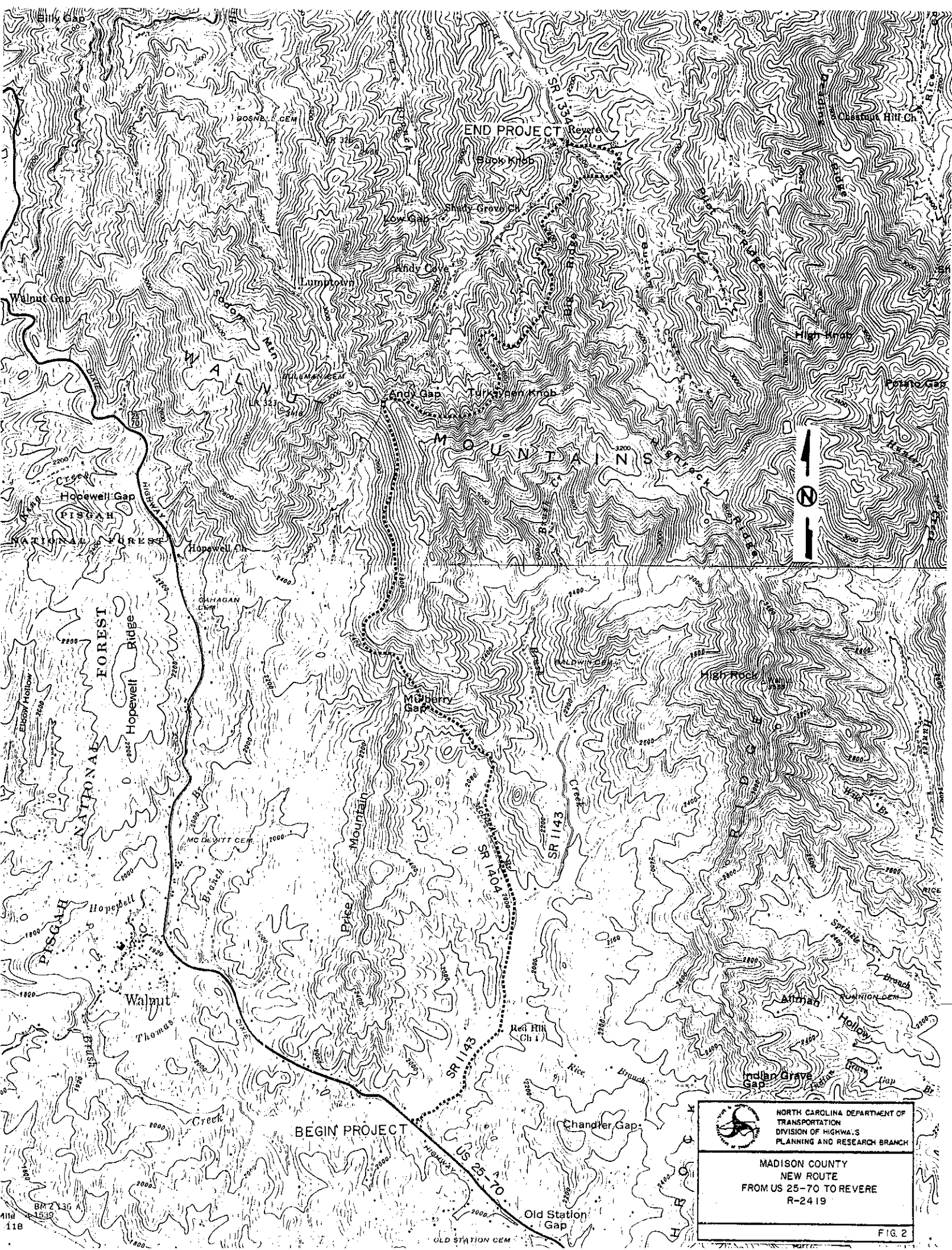

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FIG. 2